

WHAT IS CLAIMED IS:

1. An image sensing apparatus using an image sensing element, comprising:

5 a setting device which sets, in one image signal output from the image sensing element, a signal from a predetermined pixel region, a first reference signal for DC recovery, and a second reference signal;

10 a first correction device which DC-recovers the signal from the predetermined pixel region for each row on the basis of the first reference signal set by said setting device; and

15 a second correction device which uniformly DC-recovers signals from the predetermined pixel region on the basis of the second reference signal set by said setting device.

2. The apparatus according to claim 1, wherein the first reference signal includes a signal free from influence of a signal converted by a photoelectric conversion element of the image sensing element, and

20 the second reference signal includes a signal containing a dark current component generated in the photoelectric conversion element of the image sensing element.

3. The apparatus according to claim 2, wherein the 25 second reference signal includes a signal obtained in a region which includes the photoelectric conversion element in the image sensing element and is shielded

from incident light.

4. The apparatus according to claim 3, wherein the first reference signal includes a signal obtained in a region which does not include the photoelectric conversion element in the image sensing element.

5. The apparatus according to claim 3, wherein the first reference signal includes a signal output from a reference power supply for each row of the predetermined pixel region.

10 6. The apparatus according to claim 1, wherein said second correction device has a storage device which stores the signal from the predetermined pixel region, a calculation device which calculates a representative value of the second reference signal, and a subtraction device which subtracts the representative value of the second reference signal that is calculated by the calculation device, from the signal from the predetermined pixel region that is stored in the storage device.

20 7. The apparatus according to claim 3, wherein the calculation device has a calculation device which calculates representative values of the second reference signal for a plurality of regions obtained by dividing the region which includes the photoelectric conversion element in the image sensing element and is shielded from incident light, and a device which outputs to the subtraction device a lowest value among

the representative values of the plurality of regions that are calculated by the calculation device.

8. The apparatus according to claim 6, wherein the representative value includes any one of an average value, a median, and a mode.

9. An image sensing apparatus comprising:

a photoelectric conversion region which includes two-dimensionally arrayed photoelectric conversion elements;

10 a first correction device which corrects a signal from the photoelectric conversion region on the basis of a first reference signal common to each line; and

a second correction device which corrects the signal from the photoelectric conversion region on the basis of a second reference signal common to signals from the two-dimensionally arrayed photoelectric conversion elements,

wherein the first reference signal includes a signal free from influence of a signal generated by the photoelectric conversion element, and the second reference signal contains a dark current component generated in the photoelectric conversion element.

10. The apparatus according to claim 9, wherein the second reference signal includes a signal from a photoelectric conversion element which is shielded from light in the photoelectric conversion region.